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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/919,670

08/28/97

AKIZUKI

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SANYO-74

LM01/0926

MICHAELSON & WALLACE
PARKWAY 109 OFFICE CENTER
328 NEWMAN SPRINGS ROAD
P O BOX 8489
RED BANK NJ 07701

EXAMINER

HARRINGTON, A

ART UNIT

PAPER NUMBER

2712

DATE MAILED:

09/26/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/919,670

Applicant(s)

AKISUKI

Examiner

HARRINGTON

Group Art Unit

2712

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 7.21.00
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-12 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-12 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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DETAILED ACTION

1. The request filed on 7/21/00 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/919,670 is acceptable and a CPA has been established. An action on the CPA follows.

Response to Arguments

2. Applicant's arguments filed 7/21/00 have been fully considered but they are not persuasive in relation to claims 1 and 7. Applicant argues prior art record of Anderson in view of Kare fails to teach both recording and displaying should happen before an operation of battery charging. However, after reviewing Anderson (US 5,963,255) again, the Examiner must respectfully disagree. Anderson clearly teaches not draining the battery because such drain causes image data in the memory to be lost. And, as the power weakens, placing the camera in lower power states by cutting the supply of power to elements of the camera which has a display for live viewfinder and reproduced images (see col. 7, lines 1-4). Specifically, Anderson details that in powers states three and four (see col. 7, lines 29-35), the flash unit is the first to see power cuts, but other segments of the camera may operate. Thus, Anderson's camera implicitly would include recording and displaying before charging a flash could occurs. Therefore, Anderson does disclose all the claimed features of claim amended claim 1 and 7.

Additionally, applicants argument with regard to claim 11 are considered to be supported by Anderson and Kare. As discussed above Anderson teaches the flash unit is the first to see power cuts, but other segments of the camera may operate. Anderson's camera implicitly would

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include recording and displaying before charging a flash could occurs. Kare teaches that charging the flash and using the camera to take an image and other related function should not occur at the same time (one at a time). Thus both provide teaching not displaying, recording and charging at the same time. Thus, it would have been further obvious to one of ordinary skill in the art, to control the monitor/display to be inoperative while a capacitor is charging after recording image data on a recording, since Anderson teaches shutting off the flash to conserve energy when recording and displaying and Kare further illustrates charging and any imaging related function should occur sequentially(one at time/ one after the other). Therefore, the system would prevent the power source from heavily loaded periods of use which cause the camera system to increase the longevity of the battery/power source usage.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 5,963,255).

Regarding claim 1, Anderson disclose an digital camera comprising a signal processor (16) for processing an image signal output from imaging element(col. 3, lines 53-60 and col. 4, lines 1-

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10 and see figure 1); a LCD display for displaying image data (see figure 4, #18); an electronic flash device (#66, see figure 2) comprising a capacitor (col. 5, lines 10-28) and a discharge tube must receive the output ;battery for supplying current to all the circuitry of the camera (#17 and #74; see figure 1 and 3; col. 5, lines 29-42); a battery voltage detection circuit (#76; col. 5, lines 59-65; and the system controller (col. 2, lines 55-60; see figure 3 and 4; col. 5, lines 54-57).

Anderson's system controls the camera such that when the voltage of the battery falls below the predetermined value (5.2 v), the camera shuts down power to some of the components in the system. For example: The flash charging is completely shut down in power state 3, and the camera system may still take images and thus could still display images. In another mode, the charging the flash is lessened (not the maximum charge amount) and camera image processing and other functions are allowed to be implemented, such as display. Thus, Anderson's camera system is clearly teaching to powering down individual circuits which have a great deal of influence on battery drain, such flash, processing and display to increase the longevity of the battery/power supply. Additionally, it is clear that Anderson also teaches efficient use of the energy available in the camera when power level output from the batter is not at a maximum or well above the threshold/predetermined value (minimum safe operating voltage; see col. 6, lines 1-25; col. 7, lines 23-45; col. 8, lines 1-51 and col. 10, lines 29-55). Anderson also clearly teaches in a power failure state (power state 1) that shutting down image recording and displays to complete the processing of image data. Specifically, Anderson details that in powers states three and four (see col. 7, lines 29-35), the flash unit is the first to see power cuts, but other segments of the camera

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may operate. Thus, Anderson's camera implicitly would include recording and displaying before charging a flash could occurs. However, Anderson fails to disclose a single controller. Although, the controller is a cooperation of two main components of the system (the computer and the power circuit), forming a single integrated unit would have been obvious to anyone of routine skill in the art.

As for claim 2, See Examiners notes in claim 1. Additionally, Anderson discloses the minimum safe operating level is 5.2 and a shut down sequence doesn't occur until the power level falls below the minimum. Thus, charging the capacitor and display could be performed when the power in the battery is at least the predetermined value (col. 5, lines 43-48; col. 7, lines 23-32 and 40-46; col. 8, lines 14-17).

As for claim 3, Anderson fails to specifically disclose the predetermined value is half the value of the a full amount of electric charge stored in the battery. However, the Examiner asserts that Anderson discloses the claimed invention with the exception of this limitation and it appears the invention would work equally as well without specifying the threshold value is half of the battery maximum voltage level.

As for claim 4, see Examiners notes in claim 3 and 1 and see col. 5, lines 45-48 and col. 6, lines 1-5.

As for claim 5, see Examiners notes in claim and col. 7, lines 1-5.

As for claim 6, Anderson's signal processor (16) contains a memory and digital signal processor . However, it is notoriously well known in the art that a camera system could

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incorporate two processors (digital and analog) to processor image signals as they are output from the imager initially and then digitally processor them late for digital transmission or use in external digital equipment connected to the camera. Therefore, it would have been obvious to one of ordinary skill in the art to include incorporate two processors in a camera system to expand the external use of the image signal(digital broadcast, conferencing; recreational image manipulation (photo software) by computers etc).

As for claim 7, Anderson's system controls the camera such that when the detected voltage of the battery falls below the predetermined value (5.2 v), the camera shuts down power to some of the components in the system. For example: *In another mode when powering shutdown sequence has begun, the charging the flash is lessened (not the maximum charge amount) and camera image processing and other functions are allowed to be implemented, such as display.* Thus, Anderson's camera system is clearly teaching to powering down individual circuits which have a great deal of influence on battery drain, such flash, processing and display to increase the longevity of the battery/power supply. Additionally, it is clear that Anderson also teaches efficient use of the energy available in the camera when power level output from the battery is not at a maximum or well above the threshold/predetermined value (minimum safe operating voltage; see col. 6, lines 1-25; col. 7, lines 23-45; col. 8, lines 1-51 and col. 10, lines 29-55). Additionally, see Examiners notes in claim 1.

As for claim 8, See Examiners notes in claim 1. Additionally, Anderson discloses the minimum safe operating level is 5.2 and a shut down sequence doesn't occur until the power level

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falls below the minimum. Thus, charging the capacitor and display could be performed when the power in the battery is at least the predetermined value (col. 5, lines 43-48; col. 7, 23-32 and 40-46; col. 8, lines 14-17).

As for claim 9, see Examiners notes in claim 7 and 3.

As for claim 10, see Examiners notes in claim 9 and 7.

4. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kare.

As for claim 11, see Examiners notes in claim 1. In addition, controller receives a signal indicating the voltage is below a predetermined value. As discussed above, Anderson disclose preventing complete charging of the capacitor and displaying an image simultaneously when the charge level is below a predetermined value. Kare supports completing the charging of the capacitor before imaging can occur. Thus, Anderson and Kare disclose preventing charging of the capacitor and displaying an image simultaneously when the charge level is below a predetermined value. They also teach charging the flash completely before starting the imaging cycle. Thus, it would have been further obvious to one of ordinary skill in the art, to control the monitor/display to be inoperative while a capacitor is charging after recording image data on a recording, since Anderson teaches shutting off the flash to conserve energy when recording and displaying and Kare further illustrates charging and any imaging related function should occur sequentially (one at time/ one after the other). Therefore, the system would prevent the power source from heavily

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loaded periods of use which cause the camera system to increase the longevity of the battery/power source usage.

As for claim 12, see Examiner notes in claim 11 and 2.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Yamagishi (US 5,854,875) discloses detecting the power supply before initiating modes such as recording and external display; and

b. Yamamoto (US 5,864,726) discloses using threshold values to determine power levels for reading and recording image signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Harrington whose telephone number is (703) 308-9295. The examiner can normally be reached on Tuesday to Friday from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Wendy Garber, can be reached on (703) 305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to:

(703) 308-6306, (for formal communications intended for entry)

Or:

(703) 308-6296 (for informal or draft communication, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

AMH:



September 22, 2000



Wendy Garber
Supervisory Patent Examiner
Technology Center 2700